THUSARA SARATH

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OBJECTIVE

Seeking a full-time position in the field of computer engineering with an emphasis on software development, embedded systems, image processing, or distributed systems.

TECHNICAL SKILLS

- **Programming:** C/C++, C#, Java, Assembly, VHDL, MATLAB
- **Hardware:** ARM Cortex M3, HCS12/9S12, Cyclone II FPGA, Spartan-3E FPGA
- **Web:** CSS, PHP/HTML, Joomla CMS
- **Relevant Courses:** Operating Systems, Algorithms and Data Structures, Embedded Systems, Object-Oriented Design, Computer Architecture and Organization, Advanced Computer Networks, Advanced Programming Languages

EDUCATION

- Bachelor of Computer Engineering – Ryerson University 2015
- International Baccalaureate (IB) Diploma – Victoria Park Collegiate Institute 2008

EXPERIENCE

FFsplit Streaming Application: *Co-Founder & Lead DirectShow Developer* 2012-Present

- Rapid software development using Bitbucket revision control in C++/C#.
- Leveraged inter-process communication, DirectX APIs, open-source libraries and code optimization.
- Considerably minimized CPU usage by converting GDI bitmap code into efficient DirectX surfaces.
- Created a DirectShow plugin that interfaced with the FFMPEG open source library.
- Added multithreading support to increase software scalability and improve performance on higher end CPUs.
- Communicated with thousands of end-users and aggregated user feedback to determine areas in need of improvement.

Ad-Hoc Network Design Project: *Group Leader* 2014-2015

- Analysed and traced unfamiliar source code (~ 8000 lines) and converted it to an Android app in Java with no prior Android experience.
- Lead a group of 3 in researching concepts, generating proposals, and conduct requirements analysis.
- Presented non-technical reports to Faculty Coordinators through bi-monthly meetings.

ARM Cortex Media Player: *Hardware Engineer* 2014-2015

- Programmed an ARM Cortex M3 Microcontroller in C and Assembly to interface with multiple peripherals such as buttons, joysticks, LCD panels and load cells.
- Designed, built, and soldered components onto a 9S12 microcontroller board.
- Implemented real-time data processing and graphing using onboard memory and MATLAB.

Ryerson University eSports: *Executive Member* 2012-2015

- Independently learned and implemented a Joomla CMS based website with no prior knowledge.
- Organized events and tournaments, and ensured all technical systems were properly resolved.
- Attended formal executive meetings within the group to manage affairs, establish new projects, and validate proposed ideas.